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pyrolyzing said waste, [in which pyrolysis is carried out in order to distill, at low temperature (600 to 700°C) and in the absence of oxygen, all the combustible waste, whatever its] said waste having a net calorific value (NCV), [and in order to] thereby produc[e]ing coke and fuel gases; [, rich in CO, CH₄ and various tars, which can subsequently be incinerated at 1200°C under spontaneous combustion in a specific chamber, characterized in that the hot gas flow necessary for the pyrolysis of the waste in the course of distillation is provided by the] combusting[on of] the coke with a deficiency of air, [the gases produced moving countercurrentwise to the solids] thereby producing hot gases for the pyrolysis of the waste.

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2.- (Amended) [Plant] An apparatus for the [heat treatment] pyrolysis of waste [for the implementation of the process according to Claim 1], comprising a rotating cell [(1)] formed of a cylinder [(9)], said cylinder having a diameter and two ends, in combination with a truncated cone [(10)] rotating on the same axis, said truncated cone having a large base and a small base, said large base and said small base each having a diameter, [and comprising] a hopper for charging the waste [(3)] at one end of said cylinder, an ash box [(7)] at the other end of said cylinder, [and] a gas recuperator [(6), characterized in that], and a retaining threshold [(11) lies] between the cylinder [cylindrical chamber (9)] and the [frustoconical chamber (10)] truncated cone, creating a region of intimate contact of the waste with itself [during coking, where it receives a small amount of oxygen in a substoichiometric amount, in order to], whereby the waste is converted [it] into coke which is used as fuel in the pyrolysis of the waste.

3. (Amended) [Plant] The apparatus according to Claim 2, [characterized in that] wherein the retaining threshold [(11) for the waste connecting the cylinder (9) and the truncated cone (10)] is formed by [the] a difference between the diameter [(12)] of the cylinder [(9)] and the diameter [(13)] of the large base of the truncated cone [(10)].

4. (Amended) [Plant] The apparatus according to Claim 2, [characterized in that] wherein the truncated cone [(10) of the cell (1)] further comprises a network of nozzles fed via channels distributing [the] combustion air [(14)] in a substoichiometric amount [under the ignited coke in order to provide the heat flow necessary for the pyrolysis], thereby combusting the coke which is used as fuel in the pyrolysis of the waste.

Please add the following new claims:

5. The method of Claim 1, wherein the waste is pyrolyzed at a temperature of 600 to 700° C.
6. The method of Claim 1, wherein the waste is pyrolyzed in the absence of oxygen.
7. The method of Claim 1, wherein said fuel gases are rich in CO, CH₄, and various tars.
8. The method of Claim 1, further comprising incinerating said fuel gases.
9. The method of Claim 8, wherein said fuel gases are incinerated at 1200° C under spontaneous combustion.
10. The method of Claim 1, wherein said waste has a net calorific value (NCV) of 1500 to 10,000 kcal/kg.
11. The method of Claim 1, wherein said hot gases for the pyrolysis of the waste move countercurrent to the waste.
12. The method of Claim 1, wherein said coke is produced by contacting the waste with itself by retaining the waste on a retaining threshold.
13. The method of Claim 12, further comprising feeding combustion air in a substoichiometric amount through nozzles, thereby combusting said coke.
14. The method of Claim 13, wherein combusting said coke provides heat for the pyrolysis of said waste.
15. The method of Claim 1, wherein said fuel gases have a net calorific value (NCV) of 900 to 1100 kcal/Nm³.

✓ IN THE ABSTRACT:

Please include the attached abstract as page 8 of the specification.

Remarks

Claims 1-4 have been amended to more precisely claim the invention according to conventional practice before the United States Patent and Trademark Office. New Claims 5-15 have been added. As a result, Claims 1-15 are presented for examination. Support of new Claim 10 can be found on page 5, lines 1-3. Support for new Claims 12 and 13 can be found, for example, in original Claims 2 and 4. Support for new Claim 15 can be found on page 5, lines 4

